Fig. 1
(Prior Art)

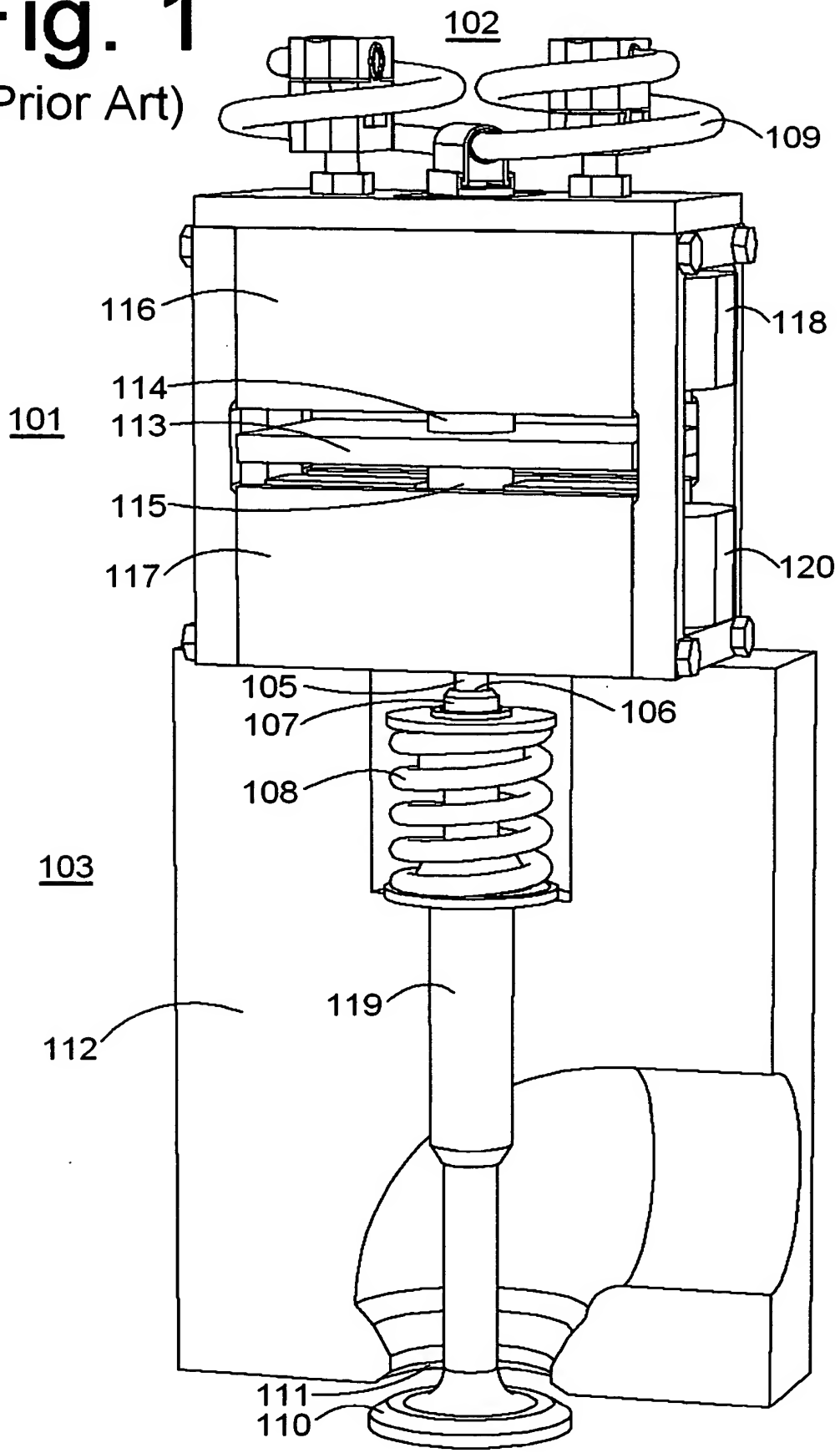


Fig. 2

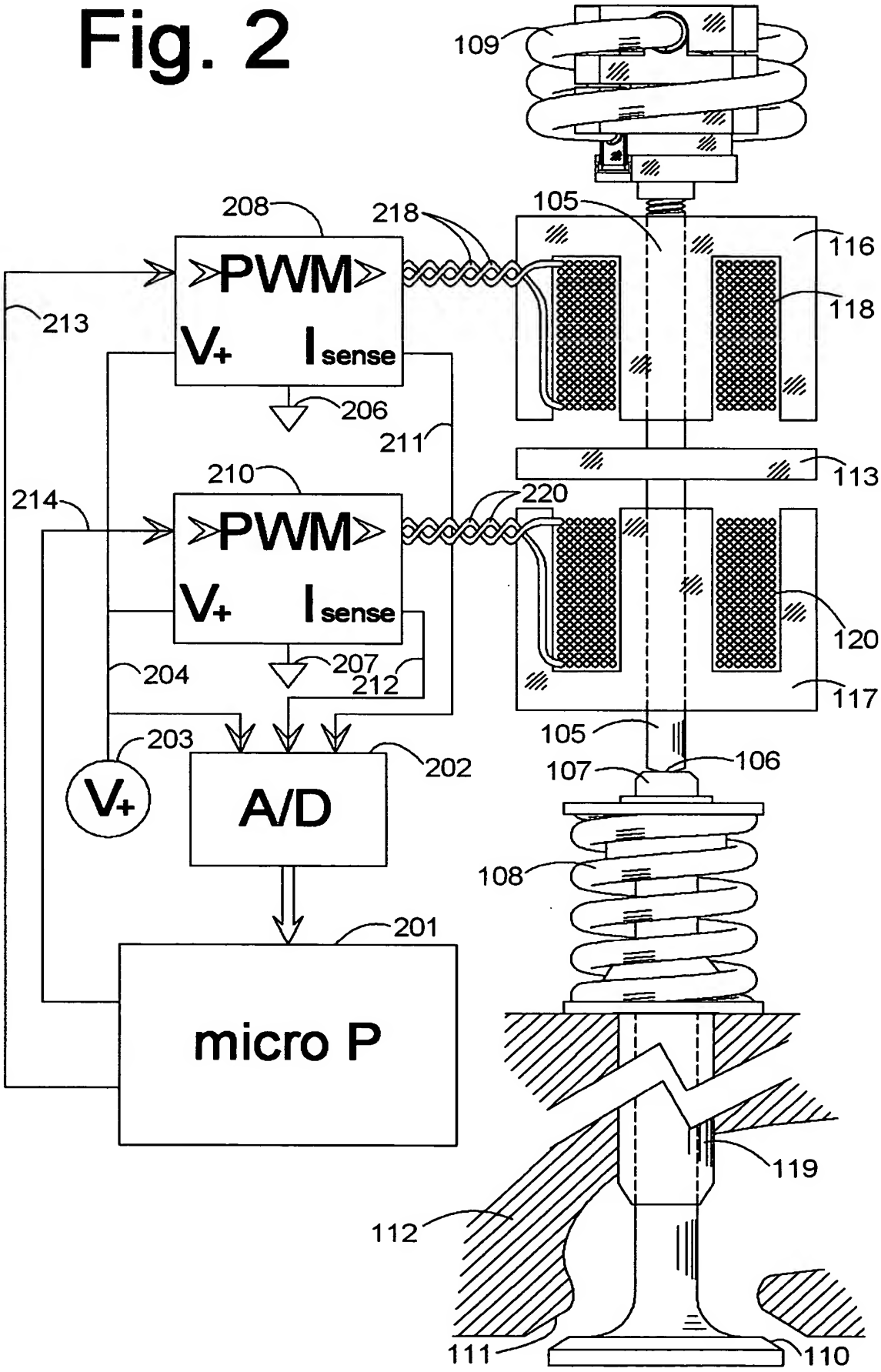

109
208
218
105
116
PWM
V+
I sense
118
213
206
211
210
214
113
PWM
220
V+
I sense
120
204
207
212
117
105
203
202
106
107
V+
A/D
108
201
micro P
119
112
111
110

Fig. 3

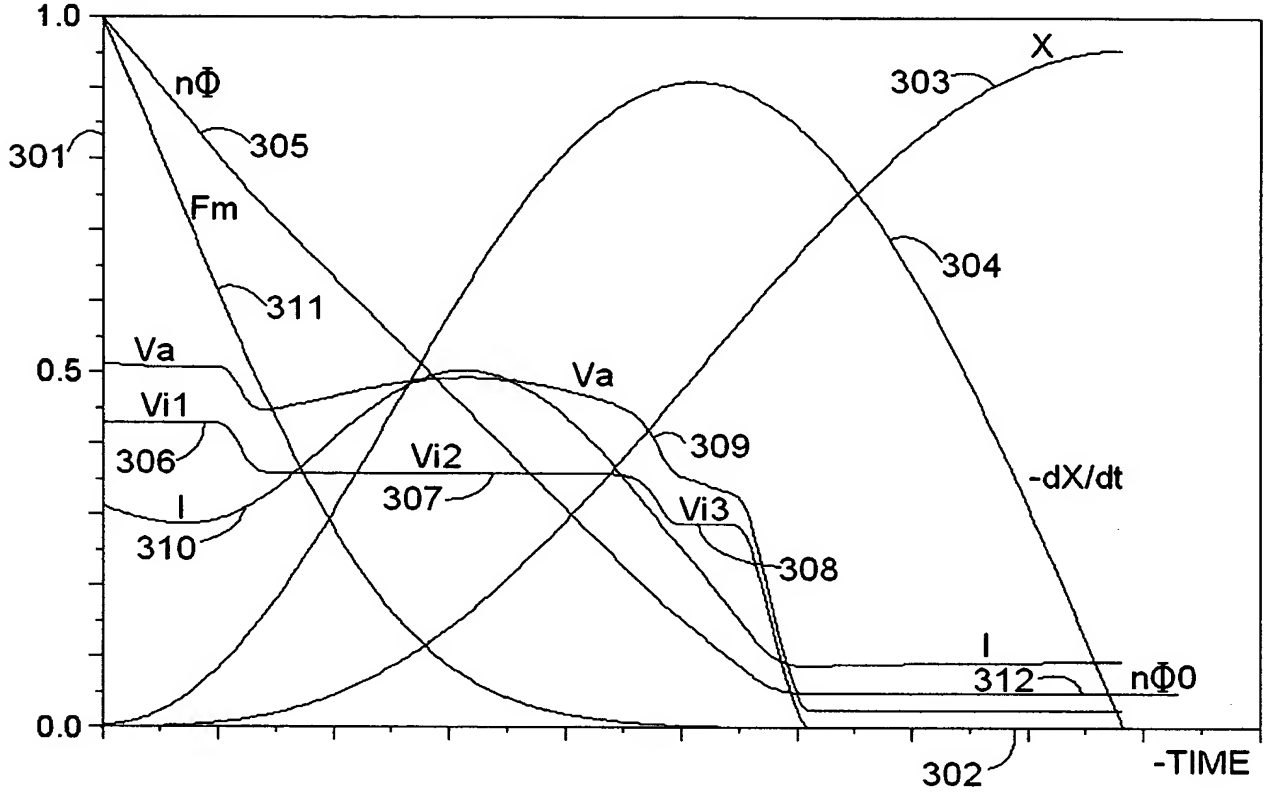

1.0
0.5
0.0
nΦ
305
301
Fm
311
Va
Vi1
306
I
310
Va
Vi2
307
309
Vi3
308
X
303
304
-dX/dt
I
312
nΦ0
302
-TIME

Fig. 4

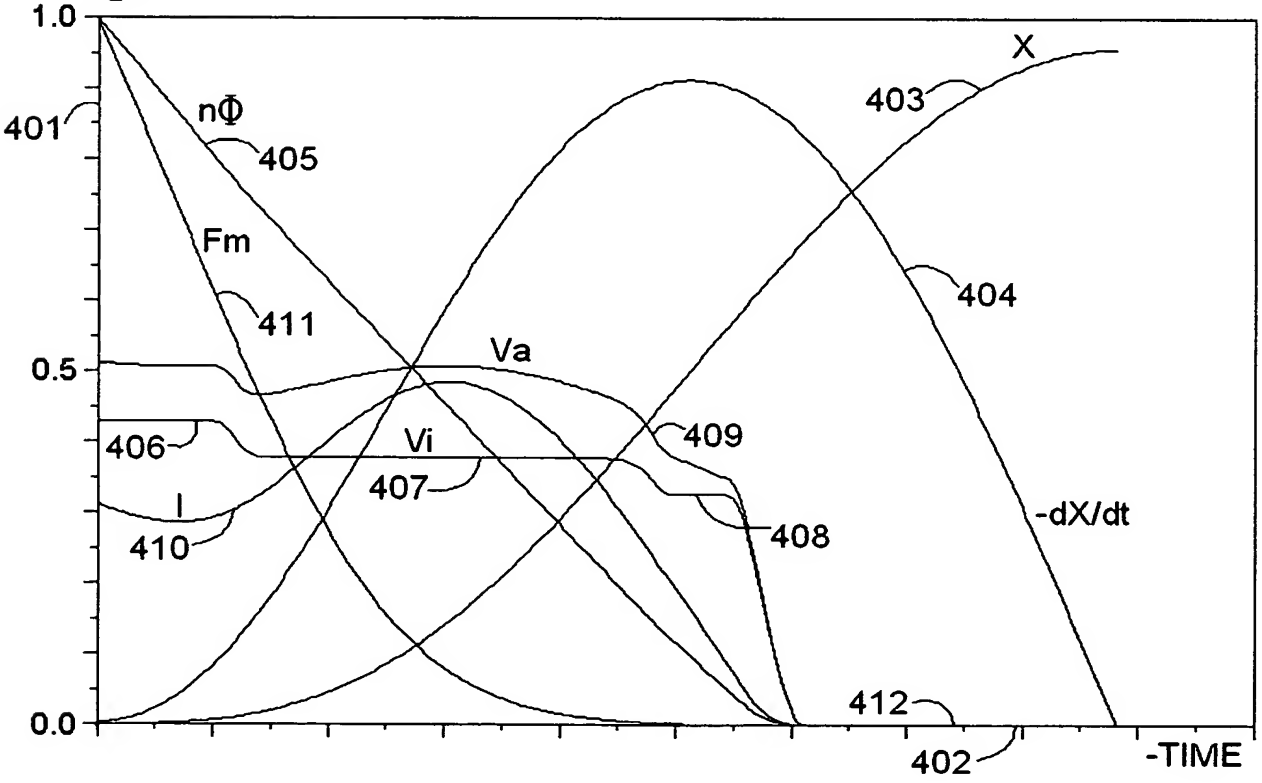

1.0
0.5
0.0
401
nΦ
405
Fm
411
406
I
410
Va
Vi
407
409
408
X
403
404
-dX/dt
412
402
-TIME

Fig. 5

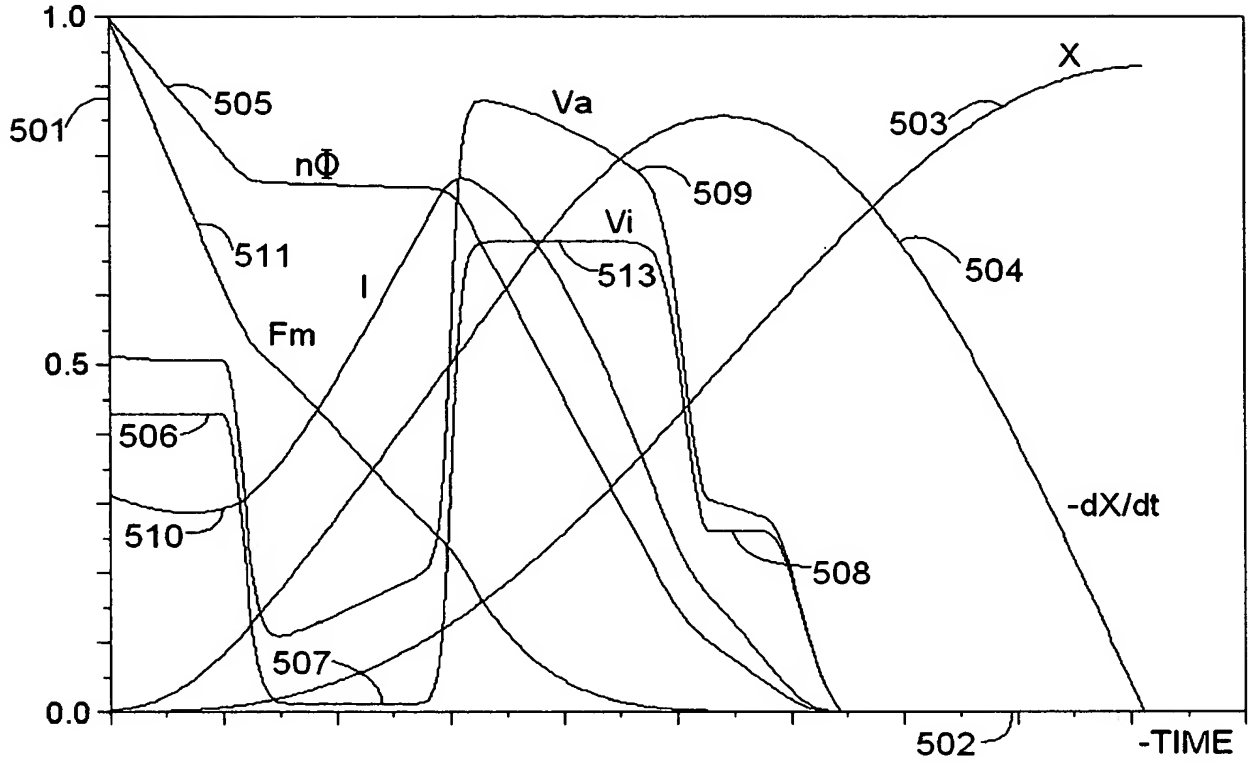

1.0
0.5
0.0
501
505
nΦ
511
I
Fm
506
510
507
Va
509
Vi
513
508
X
503
504
-dX/dt
502
-TIME

Fig. 6

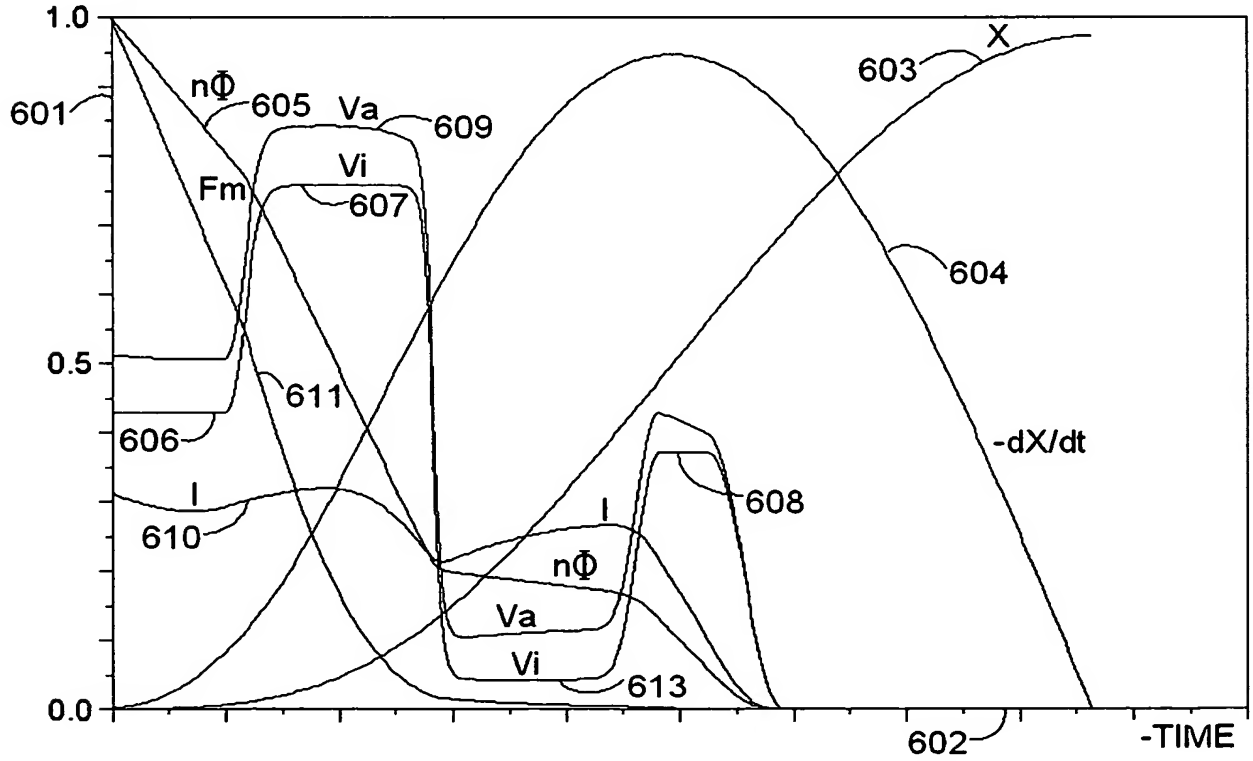

1.0
0.5
0.0
601
nΦ
605
Va
609
Vi
607
Fm
611
606
I
610
603
X
604
-dX/dt
608
nΦ
Va
Vi
613
602
-TIME

Fig. 7

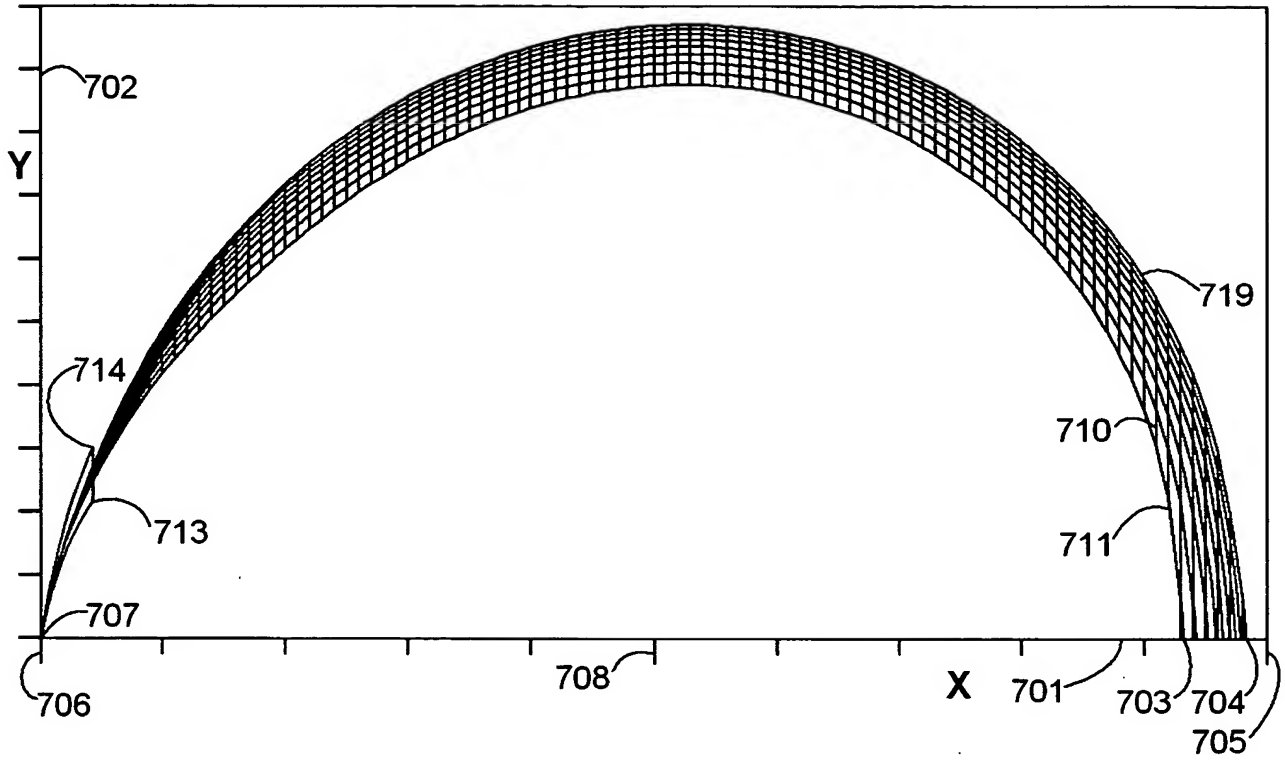

702
Y
719
714
710
713
711
707
706
708
X
701
703
704
705

Fig. 8

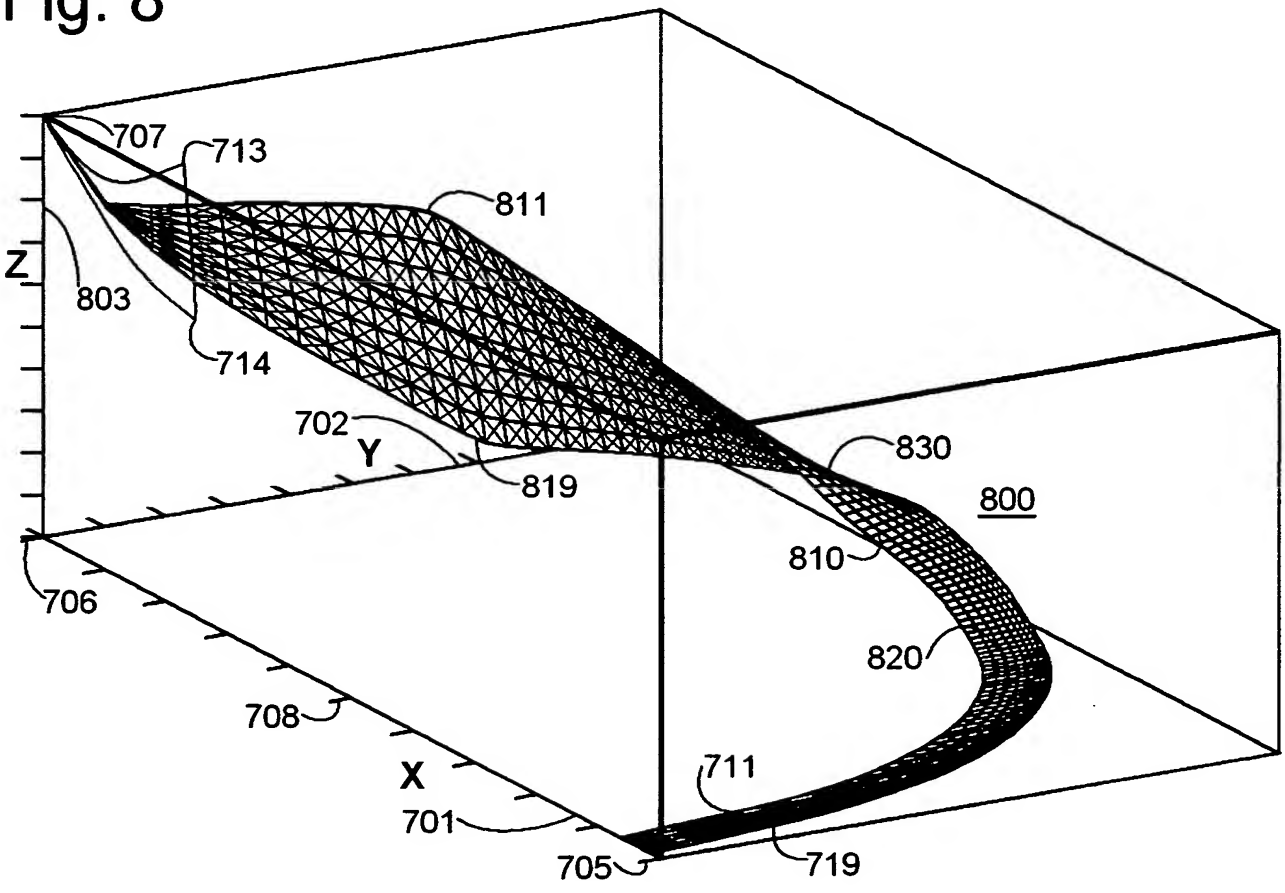

707
713
811
Z
803
714
702
Y
830
819
800
810
706
820
708
711
X
701
705
719

Fig. 9

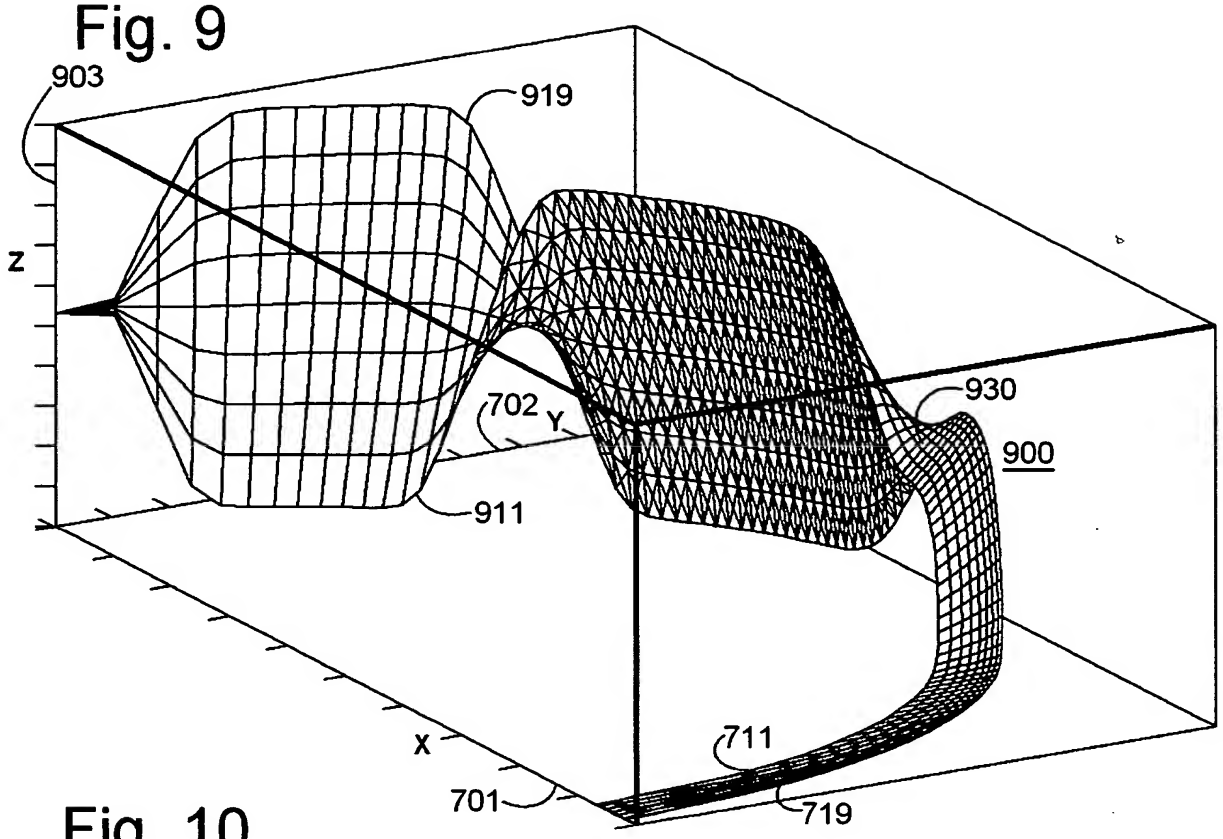

903
919
z
930
702
Y
900
911
x
711
701
719

Fig. 10

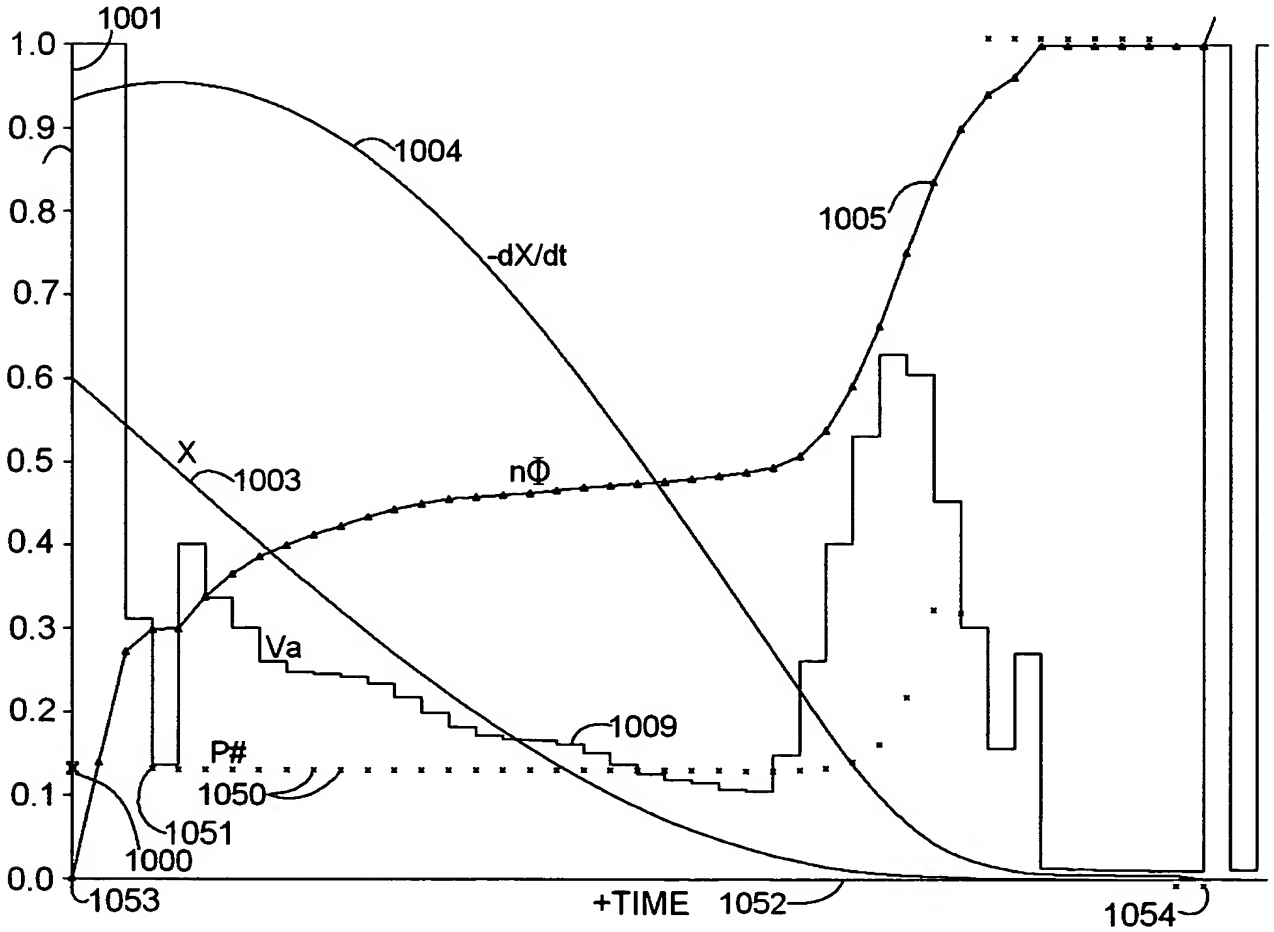

1001
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
1004
-dX/dt
1005
X
1003
nΦ
Va
1009
P#
1050
1051
1000
1053
+TIME
1052
1054

Fig. 11

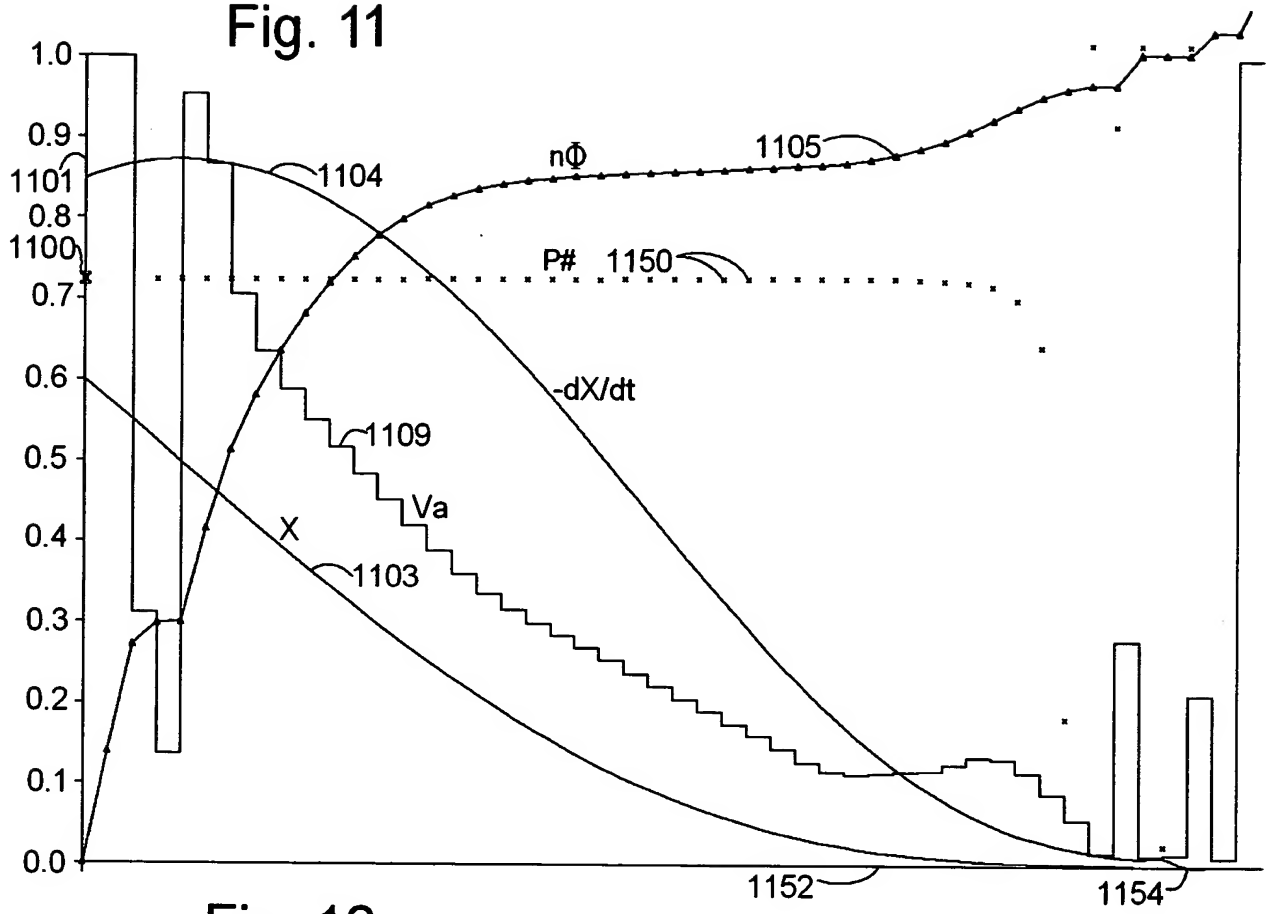

1.0
0.9
1101
0.8
1100
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
nΦ
1105
1104
P# 1150
-dX/dt
1109
Va
X
1103
1152
1154

Fig. 12

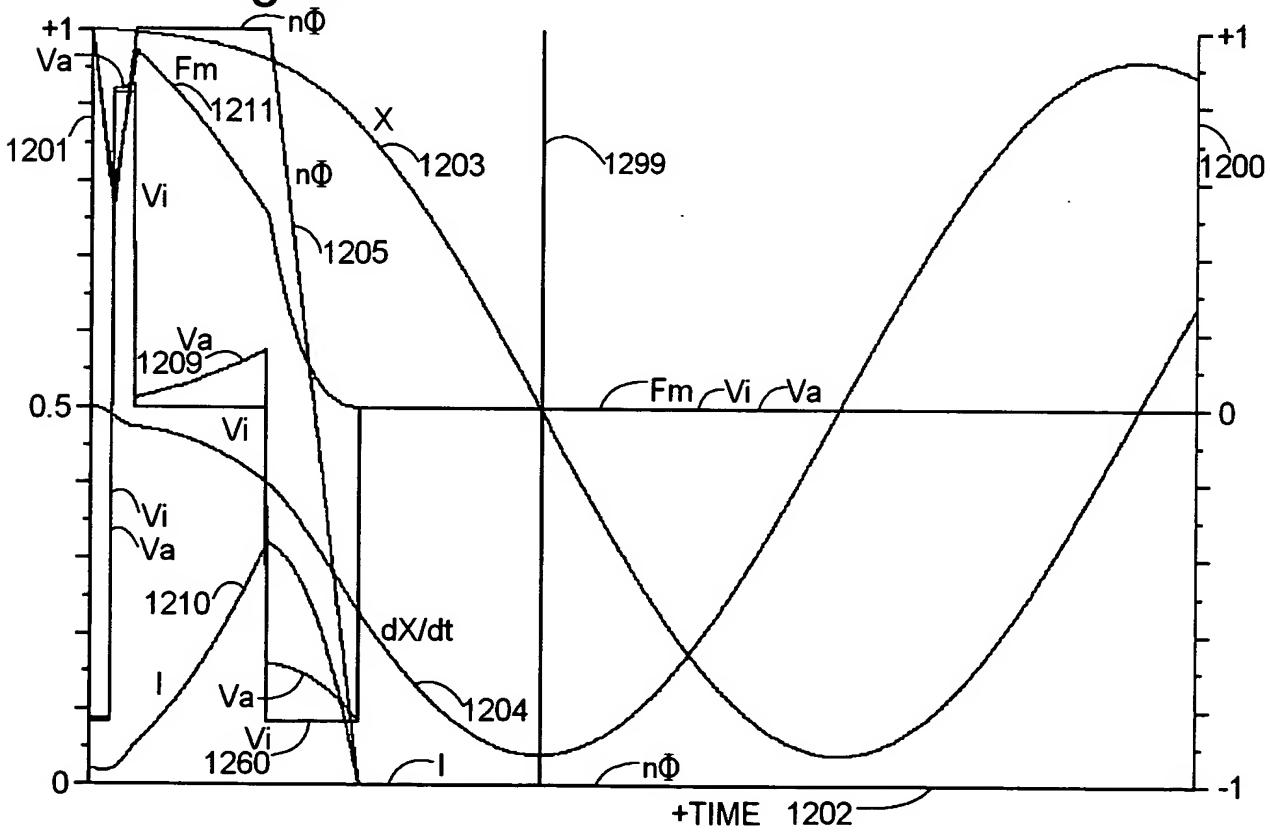

+1
nΦ
Va
Fm
1211
X
1201
1203
1299
1200
Vi
nΦ
1205
Va
1209
Fm Vi Va
0.5
0
Vi
Vi
Va
1210
dX/dt
I
Va
1204
Vi
1260
I
nΦ
0
-1
+TIME 1202

Fig. 13 TRACK Sequence Chart 1300

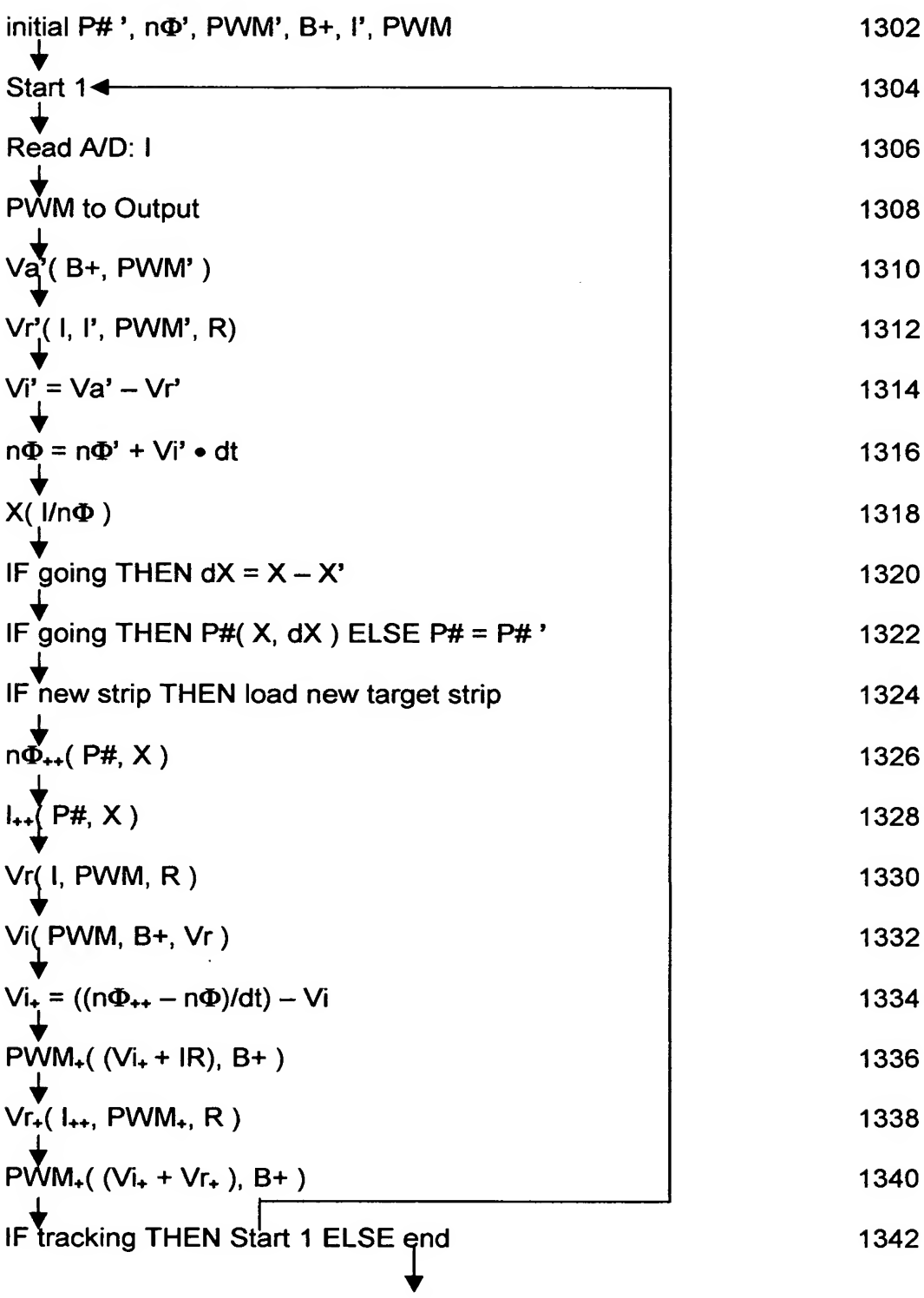


Fig. 14 RELEASE & CAPTURE 1400

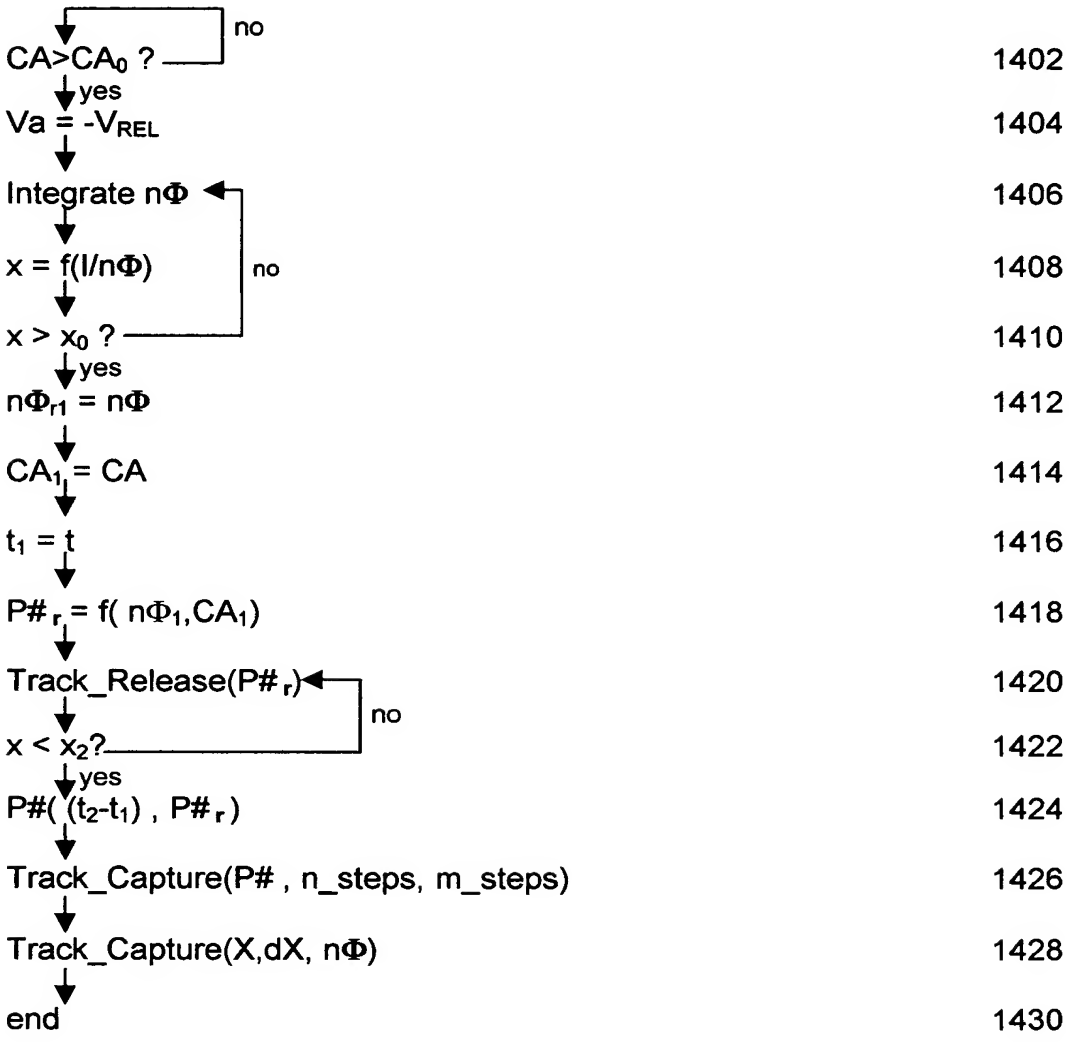
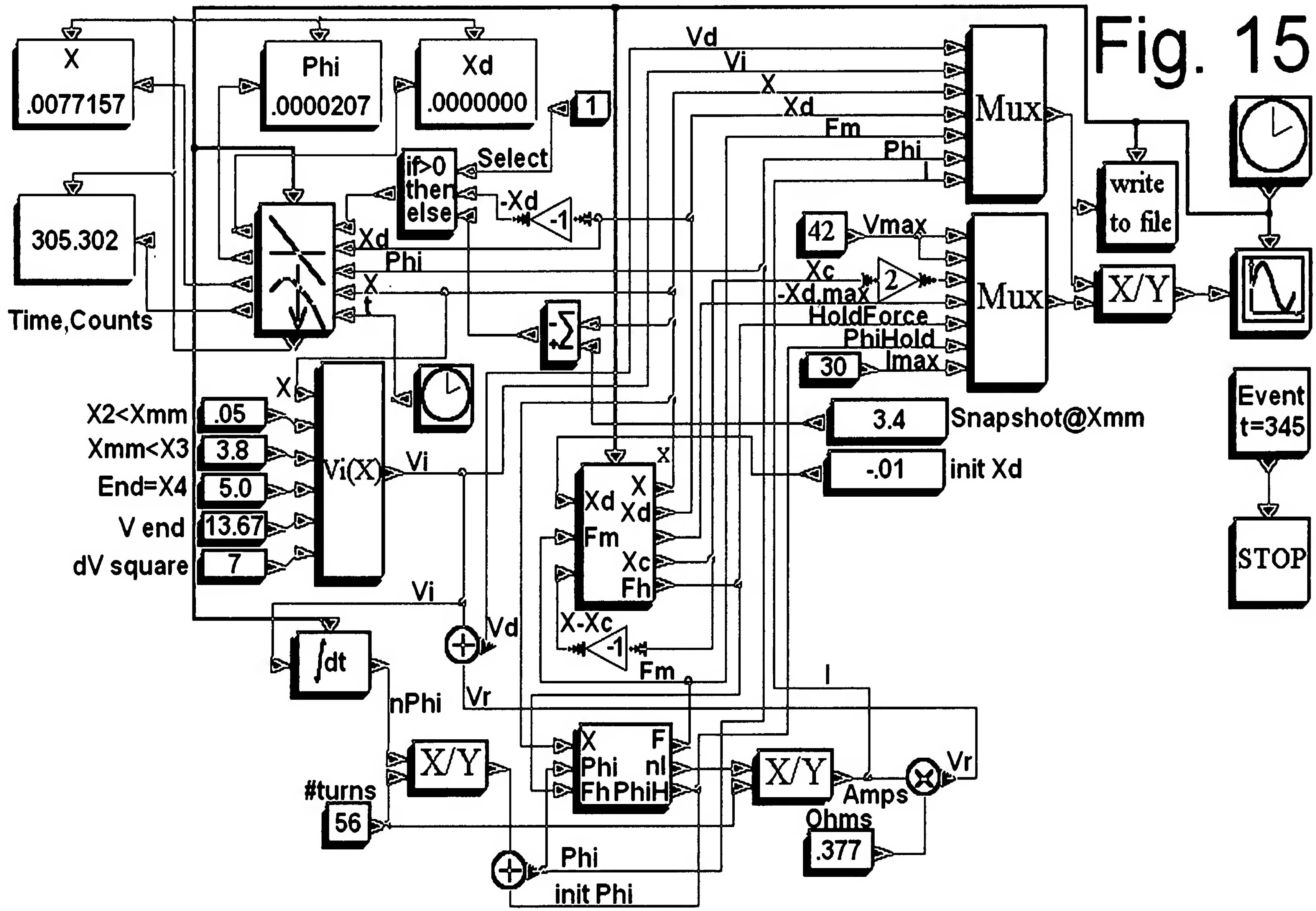


Fig. 15



X
.0077157
305.302
Time,Counts
Phi
.0000207
Xd
.0000000
1
Select
if>0
then
else
-Xd
-1
Xd
Phi
X
t
-∑
X
X2<Xmm
.05
Xmm<X3
3.8
End=X4
5.0
V end
13.67
dV square
7
Vi(X)
Vi
Vi
Vd
Vr
∫dt
nPhi
X/Y
#turns
56
Phi
init Phi
Vd
Vi
X
Xd
Fm
Phi
I
Mux
42
Vmax
Xc
2
-Xd,max
HoldForce
PhiHold
30
Imax
Mux
3.4
Snapshot@Xmm
-.01
init Xd
X
Xd
Fm
X
Xd
Xc
Fh
X-Xc
-1
Fm
I
X
Phi
Fh
F
nI
PhiH
X/Y
Amps
Ohms
.377
Vr
write
to file
X/Y
Event
t=345
STOP

Fig. 16
MDK

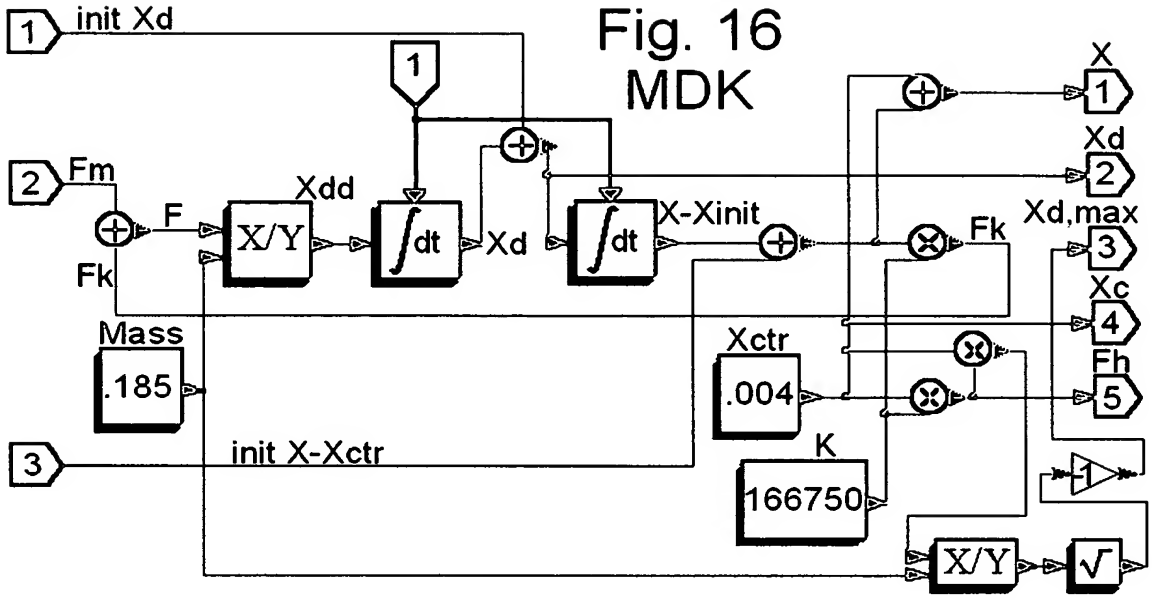


Fig. 17